Basler IP Cameras

Security Cameras Overview

- Premium Image Quality
- CCD and CMOS Sensors
- VGA to 5 Megapixels
- Multi-Streaming and Multi-Encoding
- MJPEG, MPEG-4, H.264

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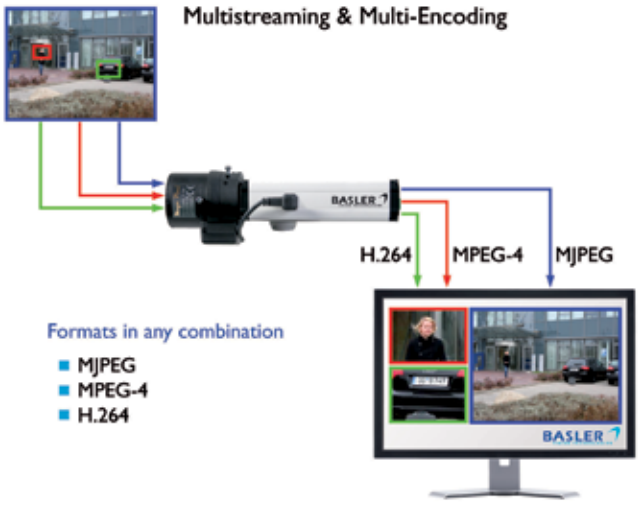
VISION TECHNOLOGIES
click. see. smile!

Features and Benefits

The Basler IP Camera product line offers flexible, high performance solutions for a wide range of applications in the area of video surveillance. Our cameras meet the market's requirements for exceptional image quality, reliability, and an excellent price/performance ratio.

Basler IP Cameras use the best and fastest CCD and CMOS sensors. The outstanding performance of these cameras is a direct result of Basler's 20 years of experience in industrial image processing.



All Basler IP Cameras have the following performance characteristics:

Multi-encoding

Only Basler IP Cameras offer the full range of video compression techniques, including standards-compliant MJPEG, MPEG-4, and H.264. Simultaneous independent streaming using different encoders provides a perfect fit for the varied requirements of users and clients. While MJPEG can deliver exceptional image quality for uses such as evidence data, MPEG-4 or H.264 can be used for lower bandwidth consumption at even higher frame rates. In addition, Basler IP-Cameras offer a choice of two different H.264 compression profiles, one of which is the High Profile (up to level 5) - the same standard used in Blu-ray technology.

Multi-streaming

Multiple streams can be set up while deploying the full set of encoders. This approach allows, for example, the customized use of multiple MJPEG, MPEG-4, and H.264 streams in any combination. The resolution and frame rate of the streams can be adjusted independently.

Scaling and AOI feature

To display a maximum of detail with the highest precision, several image formats and any aspect ratio can be configured. The unique Area of Interest (AOI) feature lets users define customized regions within the original field of view. The selected areas of interest can be streamed and encoded separately to realize not only ePTZ but also multiple virtual cameras. This means that only relevant image details will be transmitted, avoiding redundant data and leading to a significant reduction in the required bandwidth while maximizing storage utilization.

Progressive scan

Our IP Cameras with CCD image sensors employ the progressive scan method, which is the basis for exceptional image quality with reduced motion blur. The advantage of progressive scan is not only the higher vertical resolution but also the absence of the visual artifacts associated with interlaced cameras. At the same time, the CCD sensors used in our IP Cameras deliver frame rates up to 100 fps, currently making the Basler IP Cameras the fastest IP cameras in their class.

Ideal image quality

A flexible set of control functions ensures outstanding quality images for a variety of applications. Configurable measurement windows for exposure control make it possible to maintain optimal brightness for a scene. White balance can either be automatically controlled or manually adjusted resulting in ideal color fidelity. Configurable gain control, an iris drive with DC control, and the incorporation of highly sensitive CCD sensors guarantee the best representation of objects under surveillance, especially if lighting conditions are poor or changing.

Day and night functionality

True day and night functionality via an automatically retractable IR-cut filter provides a high image quality color mode for daylight applications and a black and white mode for night and low light conditions.

Motion detection and intelligent alarm buffering

Using an array of definable fields, the user can generate up to five different masks. Motion detection can be combined with extensive event and alarm management functionality. Configurable internal ring buffer storage makes it possible to access pre and post alarm images, even if no stream was sent to a client.

Basler IP Fixed Box Cameras

Small and versatile

Basler IP Fixed Box Cameras for security applications come in a wide range of resolutions from VGA to 5 megapixels. They are equipped with a CS-mount with DC iris drive as a standard feature, so you can choose from a wide range of camera lenses and integrate the most suitable one for your security needs.

An ultra-compact, all-metal housing with a 109.7 mm x 29 mm x 44 mm size and a weight of only 210 grams makes these the smallest IP cameras in their class. These characteristics contribute to their flexibility and ease of installation.

All components used in Basler IP Cameras are specifically selected to form a high quality, "made in Germany" product.

Please contact us for information about accessories available for Basler IP Fixed Box Cameras. We offer a wide variety of lenses and outdoor housings.

Basler IP Fixed Dome Cameras

Tough and flexible

Basler IP Fixed Dome Cameras are equipped with vandal-resistant aluminum housings, allowing video surveillance applications outdoors and under tough indoor conditions. With their built-in heater and fan, Basler Dome Cameras work at extreme operating temperatures from -35° to +50° C (-31° to +122° F).

Basler IP Fixed Dome Cameras are especially energy efficient. All camera functions, including the fan and heater, can be powered using standard PoE (Power over Ethernet IEEE 802.3af Class 0). Basler IP Fixed Dome Cameras are equipped with an audio function and a built-in micro SDHC card slot that can be used for local file storage.

Basler Dome Cameras can be easily mounted to a wall or a ceiling, and an internal three-axis camera bracket allows complete flexibility when aiming the camera. For optimal mounting, our accessories portfolio includes a suspended ceiling kit and a wall bracket kit.

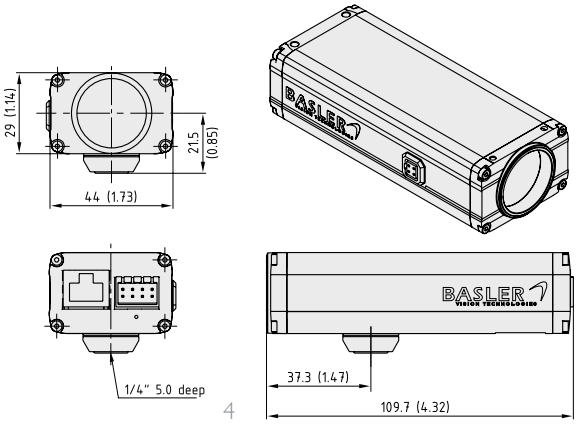
Specifications

CCD Sensor Cameras

	BIP2-640c (BIP2-640c-dn)	BIP2-1000c (BIP2-1000c-dn)
Image Sensor	Progressive Scan CCD	Progressive Scan CCD
Effective Pixels	640 (H) x 480 (V)	1024 (H) x 768 (V)
Eff. Optical Format	1/4"	1/3"
Frame Rate (max.) Full Resolution	MJPEG 60 fps; MPEG-4 60 fps; H.264 100 fps	MJPEG 30 fps; MPEG-4 30 fps; H.264 30 fps
Pixel Size	5.6 µm x 5.6 µm	4.65 µm x 4.65 µm
Day/Night	Removable IR-Cut Filter (BIP2-640c-dn)	Removable IR-Cut Filter (BIP2-1000c-dn)
Minimum Illumination	Color: 0.1 lux (F1.0/33ms), Day/Night: 0 lux (with IR illumination)	Color: 0.38 lux (F1.0/33ms), Day/Night: 0 lux (with IR illumination)
Lens	CS-mount, DC iris drive (lens not included)	CS-mount, DC iris drive (lens not included)
Image Settings	Automatic gain, exposure area, backlight compensation, white balance, electronic shutter, 180° image rotation, anti-flicker, electronic PTZ via AOI (API), text overlay, privacy masks, motion detection	
Resolution	From 160 x 120 to 640 x 480 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)	From 160 x 120 to 1024 x 768 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)
Video Compression	Motion JPEG: Multiple compression levels MPEG-4: SP (Level 3) H.264 (MPEG-4 AVC): High profile levels up to 5.0	
Video Streaming	Multi-encoding and multi-streaming for MJPEG, H.264, and MPEG-4 VBR and CBR for MJPEG, MPEG-4, and H.264, multicast and unicast	
Alarm Management	Ring buffer for pre and post alarm Events triggered by motion detection, or external input Image upload over FTP, Email, or HTTP	
Protocols	TCP/IP, HTTP, FTP, UDP, ICMP, ARP, DHCP, NTP, RTP, RTSP, RTCP, SMTP, IGMP, ZEROCONF, QoS Layer 3	
Processor/Memory	Multimedia Video Processor, FPGA, 256 MB RAM, 32 MB Flash	
Power	PoE (Power over Ethernet IEEE 802.3af Class 2) or 7 to 24 VDC, power consumption is 4 W max. at 12 VDC	
Connectors	RJ-45 connector for 10/100 BASE-T Ethernet, full or half duplex 8 pin terminal for DC power, digital I/O and RS-485	
Operating Conditions	0° to 50° C (32° to 122° F), < 90 % relative humidity (non-condensing)	
Standards	DIN EN 50130-4, FCC Class B, CE, RoHS	
Housing	109.7 mm x 29 mm x 44 mm (full metal casing)	
Weight	~210 g	

Specifications are subject to change without prior notice.

Dimensions in mm (inch)



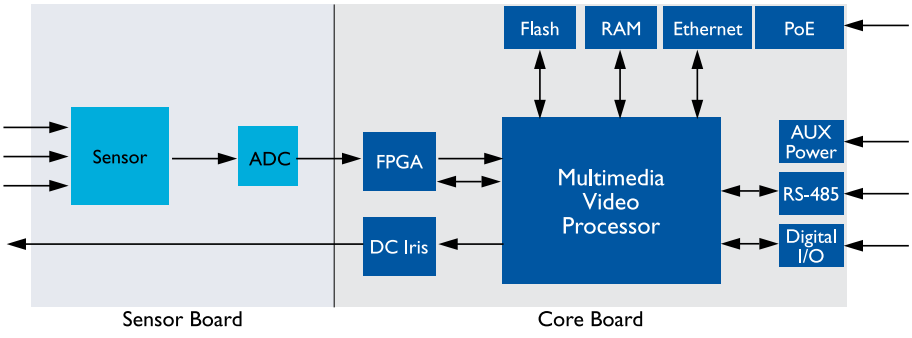
Specifications

CCD Sensor Cameras

	BIP2-1300c (BIP2-1300c-dn)	BIP2-1600c (BIP2-1600c-dn)
Image Sensor	Progressive Scan CCD	Progressive Scan CCD
Effective Pixels	1280 (H) x 960 (V)	1600 (H) x 1200 (V)
Eff. Optical Format	1/3"	1/1.8"
Frame Rate (max.) Full Resolution	MJPEG MPEG-4 H.264 30 fps 30 fps 30 fps	MJPEG MPEG-4 H.264 15 fps 15 fps 15 fps 25 fps 25 fps 25 fps (BIP2-1600-25c/-dn)
Pixel Size	3.75 µm x 3.75 µm	4.4 µm x 4.4 µm
Day/Night	Removable IR-Cut Filter (BIP2-1300c-dn)	Removable IR-Cut Filter (BIP2-1600c-dn)
Minimum Illumination	Color: 0.34 lux (F1.2/33ms), Day/Night: 0 lux (with IR illumination)	Color: 0.4 lux (F1.4/33ms), Day/Night: 0 lux (with IR illumination)
Lens	CS-mount, DC iris drive (lens not included)	CS-mount, DC iris drive (lens not included)
Image Settings	Automatic gain, exposure area, backlight compensation, white balance, electronic shutter, 180° image rotation, anti-flicker, electronic PTZ via AOI (API), text overlay, privacy masks, motion detection	
Resolution	From 160 x 120 to 1280 x 960 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)	From 160 x 120 to 1600 x 1200 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)
Video Compression	Motion JPEG : Multiple compression levels MPEG-4: SP (Level 3) H.264 (MPEG-4 AVC): High profile levels up to 5.0	
Video Streaming	Multi-encoding and multi-streaming for MJPEG, H.264, and MPEG-4 VBR and CBR for MJPEG, MPEG-4, and H.264, multicast and unicast	
Alarm Management	Ring buffer for pre and post alarm Events triggered by motion detection, or external input Image upload over FTP, e-mail, or HTTP	
Protocols	TCP/IP, HTTP, UDP, FTP, ICMP, ARP, DHCP, NTP, RTP, RTSP, RTCP, SMTP, IGMP, ZEROCONF, QoS Layer 3	
Processor/Memory	Multimedia Video Processor, FPGA, 256 MB RAM, 32 MB Flash	
Power	PoE (Power over Ethernet IEEE 802.3af Class 2) or 7 to 24 VDC, power consumption is 4 W max at 12 VDC	
Connectors	RJ-45 connector for 10/100 BASE-T Ethernet, full or half duplex 8 pin terminal for DC power, digital I/O and RS-485	
Operating Conditions	0° to 50° C (32° to 122° F), < 90 % relative humidity (non-condensing)	
Standards	DIN EN 50130-4, FCC Class B, CE, RoHS	
Housing	109.7 mm x 29 mm x 44 mm (full metal casing)	
Weight	~210 g	

Specifications are subject to change without prior notice.

Architecture



Specifications

CMOS Sensor Cameras

	BIP2-1280c (BIP2-1280c-dn)	BIP2-1920c (BIP2-1920c-dn)	BIP2-2500c (BIP2-2500c-dn)
Image Sensor	Progressive Scan CMOS	Progressive Scan CMOS	Progressive Scan CMOS
Effective Pixels	1280 (H) x 720 (V)	1920 (H) x 1080 (V)	2560 (H) x 1920 (V)
Eff. Optical Format	1/3"	1/3"	1/2.5"
Frame Rate (max.) Full Resolution	MJPEG MPEG-4 H.264 30 fps 30 fps 30 fps	MJPEG MPEG-4 H.264 30 fps 30 fps 30 fps	MJPEG MPEG4 H.264 9 fps 9 fps 9 fps 15 fps 15 fps 15 fps (3 MP)
Pixel Size	3.3 µm x 3.3 µm	2.2 µm x 2.2 µm	2.2 µm x 2.2 µm
Day/Night	Removable IR-Cut Filter (BIP2-1280c-dn)	Removable IR-Cut Filter (BIP2-1920c-dn)	Removable IR-Cut Filter (BIP2-2500c-dn)
Minimum Illumination	Color: 0.55 lux (F1.2/33ms), Day/Night: 0 lux (with IR illumination)	Color: 0.65 lux (F1.2/33ms), Day/Night: 0 lux (with IR illumination)	
Lens	CS-mount, DC iris drive (lens not included)	CS-mount, DC iris drive (lens not included)	CS-mount, DC iris drive (lens not included)
Image Settings	Automatic gain, exposure area, backlight compensation, white balance, electronic shutter, 180° image rotation, anti-flicker, electronic PTZ via AOI (API), text overlay, privacy masks, motion detection		
Resolution	From 160 x 120 to 1280 x 720 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)	From 160 x 120 to 1920 x 1080 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)	From 160 x 120 to 2560 x 1920 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)
Video Compression	Motion JPEG: Multiple compression levels MPEG-4: SP (Level 3) H.264 (MPEG-4 AVC): High profile levels up to 5.0		
Video Streaming	Multi-encoding and multi-streaming for MJPEG, H.264, and MPEG-4 VBR and CBR for MJPEG, MPEG-4, and H.264, multicast and unicast		Dual streaming for MJPEG, H.264, or MPEG4, VBR and CBR for MJPEG, MPEG-4, and H.264, multicast and unicast
Alarm Management	Ring buffer for pre and post alarm Events triggered by motion detection, or external input Image upload over FTP, e-mail, or HTTP		
Protocols	TCP/IP, HTTP, UDP, FTP, ICMP, ARP, DHCP, NTP, RTP, RTSP, RTCP, SMTP, IGMP, ZEROCONF, QoS Layer 3		
Processor/Memory	Multimedia Video Processor, FPGA, 256 MB RAM, 32 MB Flash		
Power	PoE (Power over Ethernet IEEE 802.3af Class 2) or 7 to 24 VDC, power consumption is 4 W max at 12 VDC		
Connectors	RJ-45 connector for 10/100 BASE-T Ethernet, full or half duplex 8 pin terminal for DC power, digital I/O and RS-485		
Operating Conditions	0° to 50° C (32° to 122° F), < 90 % relative humidity (non-condensing)		
Standards	DIN EN 50130-4, FCC Class B, CE, RoHS		
Housing	109.7 mm x 29 mm x 44 mm (full metal casing)		
Weight	~210 g		

Specifications are subject to change without prior notice.

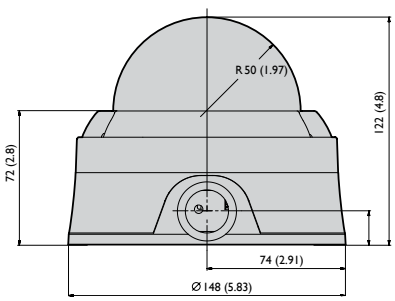
Specifications

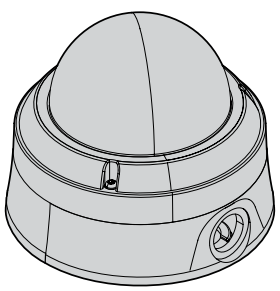
CCD Sensor Cameras

	BIP2-D1000c-dn	BIP2-D1300c-dn
Image Sensor	1/3" Sony Wfine progressive scan RGB CCD	1/3" Sony EXview HAD Progressive Scan RGB CCD
Effective Pixels	1024 (H) x 768 (V)	1280 (H) x 960 (V)
Frame Rate (max.) Full Resolution	MJPEG 30 fps / MPEG-4 30 fps / H.264 30 fps	MJPEG 30 fps / MPEG-4 30 fps / H.264 30 fps
Pixel Size	4.65 µm x 4.65 µm	3.75 µm x 3.75 µm
Minimum Illumination	Color: 1.7 lux (F1.3/33ms), Day/Night: 0 lux (with IR illumination)	Color: 1.28 lux (F1.3/33ms), Day/Night: 0 lux (with IR illumination)
Lens	Varifocal 2.8 - 10 mm, F1.3, DC iris, horizontal angle of view 20° - 80°, removable IR-cut filter for day/night function	
Camera Angle Adjustment	Pan: ±180°, tilt: 120°, rotation: 360°	
Image Settings	Automatic gain, exposure area, backlight compensation, white balance, electronic shutter, 180° image rotation, anti-flicker, electronic PTZ via AOI (API), text overlay, privacy masks, motion detection	
Resolution	From 160 x 120 to 1024 x768 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)	From 160 x 120 to 1280 x 960 (free scaling), 4:3, 16:9, multiple Areas of Interest (AOIs)
Video Compression	Motion JPEG : Multiple compression levels MPEG-4: SP (Level 3) H.264 (MPEG-4 AVC): High profile levels up to 5.0	
Video Streaming	Multi-encoding and multi-streaming for MJPEG, H.264, and MPEG4 VBR and CBR for MJPEG, MPEG-4, and H.264, multicast and unicast	
Audio	Bidirectional half-duplex audio streaming; Mic-in/Line-in, Line-out; G.711	
Alarm Management	Ring buffer for pre and post alarm, microSDHC card slot for local storage Events triggered by motion detection or external input Image upload over FTP, e-mail, or HTTP	
Protocols	TCP/IP, HTTP, UDP, FTP, ICMP, ARP, DHCP, NTP, RTP, RTSP, RTCP, SMTP, IGMP, ZEROCONF, QoS Layer 3	
Processor/Memory	Multimedia Video Processor, FPGA, 256 MB RAM, 32 MB Flash	
Power	PoE (Power over Ethernet IEEE 802.3af Class 0) or 7 to 24 VDC, power consumption is 7 W max at 12 VDC (excl. heater)	
Connectors	RJ-45 connector for 10/100 BASE-T Ethernet, full or half duplex Push-in terminal for DC power, digital I/O and RS-485/422	
Operating Conditions	-35° to 50° C (-31° to 122° F), < 90 % relative humidity (non-condensing)	
Standards	DIN EN 50130-4, FCC Class A, CE, RoHS	
Housing	Ø 148 mm x 122 mm (Ø 5.83" x 4.8") aluminum chassis with polycarbonate dome bubble, IP66, IK10	
Weight	~1.0 kg	

Specifications are subject to change without prior notice.

Dimensions in mm (inch)



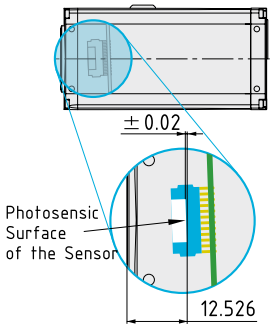


What Makes Basler Camera Quality So Special?

To ensure consistently high product quality, we employ several inspection procedures during manufacturing. The following list indicates three of the most important quality assurance tools we use to meet your highest requirements.

Camera Sensor Alignment Tool (CSAT):

Due to higher resolutions and smaller pixels, depth of focus and the exact positioning of the imaging sensor in the camera are becoming more and more critical. An area scan sensor must be aligned in six degrees of freedom.



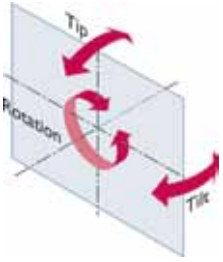
The back focal length on each camera is carefully measured and adjusted by our unique "CSAT" procedure. This guarantees an optimum distance between the lens flange and the sensor and ensures outstanding image quality based on compliance with optics standards.

Temperature Test

As a final check, each camera passes a stress test. Cameras are tested over the entire temperature range specified in our documentation. By doing this, we can identify and remove temperature sensitive weak spots in the camera. This guarantees consistent image quality in conditions with quickly changing temperatures.

Camera Test Tool (CTT+)

Our advanced Camera Test Tool (CTT+), the first fully automated inspection system for digital cameras, checks all of the significant quality aspects of each camera we produce. The CTT+ is a unique combination of optics, hardware, and software that can be quickly and efficiently used to calibrate a camera and to measure its performance against a set of standards. For defined sets of conditions, an automated software program examines the camera's output, makes any calibration adjustments necessary, and compares the output to a strictly defined set of performance criteria.



Camera Test Tool CTT+ proven

Basler customers get a 100% tested camera, all of the benefits that go along with 100% testing, and a much higher level of satisfaction. This is a definite win-win situation.

RoHS Compliance

The Basler IP Camera series is RoHS compliant. This is especially important in applications where the the end user requires strict RoHS compliance in all system components.

RoHS COMPLIANT 2002/95/EC

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